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Personality features and school performance within the Romanian high school students sector

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Abstract

In this article we evaluate the possible impact of personality on school performance using information gathered by a cross-sectional local study carried out in the Timis County (West-Romania). Our findings partially confirm literature data proposing an insightful debate on the most disputed "Big Five" model. Incidentally, we bear out as suitable for a school age success the correspondence with our "adolescent model" comprising the following dimensions: Sociability, Sincerity, Inhibition, and Emotional Lability. The obtained results highlight the relation between some of the personality features and effective student educational needs.

Keywords: Adolescent; personality; school performance; education.

1. Introduction

It is generally assumed that academic performance is related to processes such as motivation, social orientation and emotional control, which may be only marginally related to cognitive ability, but more strongly related to personality (Martin, J. H. et al., 2006).

In the past, Murphy (1989) suggested that cognitive ability variables are related to performance early in employee tenure, whereas motivational processes may become more important predictors of job performance (relative to cognitive ability) as employees master their jobs. Later on, Hogan and Holland's meta-analysis of personality and job performance relationships (2003) showed that ambition (representing need for dominance) was positively related to job performance (supervisor ratings), whereas sociability (representing need for affiliation) was unrelated to performance.

The above results are supported by Albert Bandura's theory on modelling (1997), which states that "in order for modelling to be successful, the learner must be attentive, must have access to and retain the information presented, must be motivated to learn, and must be able to accurately reproduce the desired skill". Additionally, cognitive

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apprenticeships support the three stages of skill acquisition described in the expertise literature: the cognitive stage, the associative stage, and the autonomous stage.

Coincidently, we may note the difference between the two particular circumstances, academic and professional. Even if the relations between variables in the two particular circumstances were more or less congruent, in educational psychology the social constructivist paradigm views the context in which the learning occurs as central to the learning itself.

On a more practical level, taking into consideration that the performance of the Romanian educational system remains problematic (especially for the middle school condition) and the admission decisions at most Romanian Universities are influenced by high school academic performance as well as achievement in test scores, we took advantage of the opportunity and analyzed the relatively recent information gathered by a local study carried out in Timis County (West-Romania).

The results of this research are meant to provide advanced information for the use of educational planners by evaluating the impact of personality trait structure on school performance.

2. Participants and methods

The study included 2908 high school students from grades 9 to 12, participants in the survey in early 2005. They answered a 126-item questionnaire, "CORT 2004 Inventory," covering risk behaviors for health such as aggressiveness, nutrition habits, relation with family members and peers, substance use etc. The research used also the Freiburg Personality Inventory (FPI), a 212-item self-rated questionnaire comprising twelve primary personality factors: nervousness, spontaneous aggressiveness, depressiveness, irritability, sociability, calmness, striving for dominance, inhibition, sincerity, extraversion, emotional lability and masculinity (J. Fahrenberg, H. Selg, R. Hampel, 1978), the last one being passed up. FPI descriptions of these factors are presented in Table 1.

Table 1. Descriptions of tests high value for FPI personality factors

Personality trait	Description for test high value
Nervousness	Tendency to somatic affections of vegetative nature (circulation, respiration, movement disorders)
Spontaneous Aggressiveness	He/she can commit physical, verbal or imaginary spontaneous aggression acts
Depression	State of indisposition or higher in fluctuating moods, but prevailing depression, tension, pessimism
Irritability	Feelings of irritability, tension, and emotional susceptibility, low tolerance to frustration, impatience, restlessness
Sociability	Desire and tendency to establish new contacts, active, communicative, talkative and prompt replier
Calmness	Calm, with equanimity, confidence, and good spirits
Striving for Dominance	Reactive aggression (physical, verbal or imaginary), knows to impose its own interest, self-centered concept, attitude of suspicion and distrust of others
Inhibition	Shy, lonely, inhibited in contact with other people, especially in community and in some situations
Sincerity	Open-minded, recognize common/small weaknesses and flaws, self-critical, in certain circumstances having a detached attitude
Extraversion	Need contacts, search and is able to establish contacts, easily connects friends, is released, vivacious, impulsive, talkative, likes variation and entertainment
Emotional Lability	Malaise or labile mood, predominantly depressed, sad, pressed, infirm, low spirits

At present, the dominant model of personality trait structure is the "Big Five", which consists of five orthogonal dimensions held to capture the full range of personality traits (Table 2):

Table 2. The "Big Five" model

Personality factor	Description
Extraversion	Being talkative, outgoing, friendly, and prone to sensation-seeking
Agreeableness	Cooperating with others, maintaining harmony, and being seen as a 'likable' person
Conscientiousness	Having the sense of duty, responsibility, and orderliness

Emotional Stability	Being level-headed, well-adjusted, and able to deal with stress
Openness	Autonomous, independent thinking, along with aesthetic and intellectual interests

Details regarding sample and questionnaire were recently published in large in a previous article (Ursoniu S. et al., 2009).

Binary logistic regression analysis was used to estimate personality trait structure influence on school performance ("marks at the end of the previous term"). The dependent variable was recoded into two categories: "bad or medium mark" (5.00-7.99), and "good or very good mark" (8.00-10.00). SPSS 13 software was used for statistical analyses, the probability of stepwise removal from the model being selected to 0.01 values, but a p-value < 0.05 was considered statistically significant.

3. Findings and results

In a previously conducted study concerning medical students, scales of Dominance, Flexibility and Socialization were positively correlated to the GPA (Grade Point Average), as dependent variable, while Sociability and Sense of well-being were negatively correlated (Chan-Ob, T., Boonyanaruthee, V., 1999). Other authors assert that "whereas prosocial orientation seems to make unique contributions to the prediction of educational achievement, sociability in the early years was also proved to be a significant and reliable predictor of later socio-emotional adjustment." (Chen, X. et al., 2002)

In this regards, we may see Socialization as a natural motivational input representing a good support or condition in the knowledge achievement effort of high school students. Furthermore, to answer correctly to students' general interests, we need to know first what their emotional needs are. For this purpose, we looked to the high school students' personality profiles for finding out their possible impacts on school performance using the logistic regression analysis (Table 3).

Table 3. Logistic regression model regarding the influence of personality structure on school performance

Personality trait	Wald	OR	95% CI		p value
			Lower	Upper	
Sociability	63.78	1.282	1.206	1.363	0.000
Sincerity	56.05	1.264	1.189	1.344	0.000
Aggressiveness	28.65	0.851	0.802	0.903	0.000
Extraversion	17.35	0.885	0.835	0.937	0.000
Inhibition	11.43	1.113	1.046	1.185	0.001
Striving for Dominance	8.99	0.911	0.857	0.968	0.003
Emotional Lability	4.94	1.100	1.011	1.196	0.026
Nervousness	4.48	0.938	0.883	0.995	0.034

In our model, Sociability is a dominant, being the variable with the best fit for the distribution of mean marks at the end of the previous term (higher the Sociability level, better the mark), suggesting thus high need for socialization in the best category. The next variable to fit in the model is Sincerity, which characterizes the genuine quality of the studied age group and also the high confidence of best students in the corresponding social environment. The third variable in range is Aggressiveness, inversely related to school performance in our model (lower Aggressiveness level, better the mark). The fourth high sensitive variable in the model is Extraversion which proves also a negative influence on mark.

As emotion regulation involves intrinsic and extrinsic processes responsible for managing one's emotions toward goal accomplishment, the following variables proving positive effects on students' marks (Inhibition and Emotional Lability) call for further attention on emotion regulation processes of the studied age group (Gullone, E. et al., 2009 a). Although, "according to Gross's process model of emotion regulation, strategies that act early in the emotion-generative process (e.g., reappraisal) should have a different profile of consequences than strategies that act later on (e.g., suppression)." (Gross, J. J., 1998)

As previously found in a study using the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA), administered to 1,128 participants aged between 9 and 15 years, Suppression use was lower for older participants compared to their younger peers, and over time participants reported less use of this strategy. Older participants also scored lower on Reappraisal but stability over time was found. Males also reported more suppression use compared to females (Gullone, E. et al., 2009 b).

In view of close relation between Inhibition and Suppression, we looked for its relations with age and sex and found out higher scores for girls older than 16 years. The FPI Manual, on the other hand, asserts that Inhibition scores does not depend on age and level of culture, but is influenced by gender, women showing higher values.

Inhibition theory says that during states of attention Inhibition linearly increases and during states of distraction linearly Inhibition decreases, so that Inhibition would have an important role in regulating mind processes. Thus, it is unsurprising to find Inhibition on its position in our model (with a positive effect on school performance), which would describe a higher level of attention for students with better semester mean mark.

Inhibition would correspond also to Suppression in a down-emotional regulation process. By contrast, Aggressiveness, Extraversion, Dominance and Nervousness would be undesirable at high levels in high school students.

We also found slightly different personality profile models for the corresponding genders, with lower levels for negative traits (relative to academic performance) – Nervousness and Dominance for girls (Table 4), plus Aggressiveness for boys (Table 5).

Table 4. Logistic regression model regarding the influence of female students personality structure on school performance

Personality trait	Wald	OR	95% CI		p value
			Lower	Upper	
Sociability	26,44	1.233	1.138	1.336	0.000
Dominance	12.05	0.885	0.783	0.934	0.001
Nervousness	10.86	0.857	0.781	0.939	0.001
Sincerity	8.82	1.142	1.046	1.247	0.003
Inhibition	7.76	1.132	1.037	1.234	0.005
Calm	4.79	0.927	0.867	0.992	0.029
Excitability	3.61	0.906	0.818	1.003	0.057

These days, educational psychologists provide effective consultation, assessment, advice, and intervention service for pupils who may have special educational needs and for other pupils about whom there may be concern. They also provide in-service training and support research projects involving teachers, other professionals and parents in fulfilling their aim to promote a wider understanding of pupils' needs. (Blandford, S., 1998 a)

In this context, our main contribution consists in emphasizing the important role of socialization for the entire development of children and especially in their high school period, when skilled educational psychologists can intervene in several directions: pupil needs, action planning, individual and whole-school behaviour policy, etc. In this perspective, "teachers need to know and understand also the role of educational psychologist in relation to their school, if pupils are to receive preventative support that is needed." (Blandford, S., 1998 b)

We also reconfirm "the need for student enculturation into authentic practices through activity and social interaction" regarding, in the same time, their special psychological conditions. (McMahon, M., 1997)

Table 5. Logistic regression model regarding the influence of male students personality structure on school performance

Personality trait	Wald	OR	95% CI		p value
			Lower	Upper	
Sincerity	20.91	1.228	1.125	1.342	0.000
Aggressiveness	10.78	0.871	0.801	0.946	0.001
Nervousness	6.98	0.895	0.824	0.972	0.008

Dominance	5.00	0.909	0.836	0.988	0.025
Depression	3.39	0.878	0.765	1.008	0.065
Sociability	2.95	1.074	0.990	1.165	0.086
Emotional lability	2.94	1.137	0.982	1.316	0.086

4. Conclusions and Recommendations

Our findings confirm part of the literature data in the field contributing to current theories consolidation regarding the study of quantification and evaluative dynamics of adolescent personality structure and proposing a more profound debate on the most disputed "Big Five" model. Incidentally, we bear out as suitable for a school age success the correspondence with our "adolescent model" comprising the following dimensions: Sociability, Sincerity, Inhibition, and Emotional Lability. At the same time, we claim academic performance as elective criteria for evaluating high school student needs in realizing potential, for which school psychologists can do a lot more.

5. Limitations

The survey was designed as a descriptive needs assessment and not for testing causal hypotheses, prevention needs or appropriate service delivery approaches for high-schools and communities. The findings reported here cannot be relevant for adolescents not attending scholar institutions. At the same time, some errors based on self reported behaviors might have been generated.

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References

Bandura, A. (1997). *Self-efficacy: The exercise of control,* New York: Freeman, 604.

Blandford, S. (1998). *Managing discipline in schools.* (2nd ed.). New York: Routledge, (Chapter 7).

Chan-Ob, T., & Boonyanaruthee, V. (1999). Medical student selection: which matriculation scores and personality factors are important? *Journal of Medical Association Tha*i. Jun; 82(6), 604-10

Chen, X., Liu, M., Rubin, K. H., Cen, G., Gao, X., & Li, D. (2002). Sociability and prosocial orientation as predictors of youth adjustment: A seven-year longitudinal study in a Chinese sample. *International Journal of Behavioral Development*, Vol. 26, No. 2, 128-136

Gross, J.J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2*,* 271-299.

Gullone, E., Hughes, E. K., King, N. J., & Tonge, B. (2009). The normative development of emotion regulation strategy use in children and adolescents: a 2-year follow-up study. *Journal of Child Psychology Psychiatry.* Oct 20.

Hogan, J., & Holland, B. (2003). Using theory to evaluate personality and job-performance relations: a socioanalytic perspective. *Journal of Applied Psychology*, Feb, 88(1), 100 - 112.

Martin, J. H., Montgomery, R. L., & Saphian, D. (2006). Personality, achievement test scores, and high school percentile as predictors of academic performance across four years of coursework. *Journal of Research in Personality*, Volume 40, Issue 4, August, 424 – 431.

McMahon, M. (1997). Social constructivism and the World Wide Web – a paradigm for learning. The Australian Society for Computers in Learning in Tertiary Education (ASCILITE).

Murphy. K. R. (1989). Is the Relationship Between Cognitive Ability and Job Performance Stable Over Time? *Human Performance*, Volume 2, Issue 3 September, 183 - 200.

Nathanson, C., Paulhus, D. L., & Williams, K. M. (2006). Predictors of a behavioral measure of scholastic cheating: Personality and competence but not demographics. *Contemporary Educational Psychology*, Volume 31, Issue 1, January, 97 - 122.

Ursoniu, S., Putnoky, S., Vlaicu, B., & Vladescu, C. (2009). Predictors of suicidal behavior in a high school student population: a cross-sectional study. *Wiener klinische Wochenschrift* 121, 564-566.